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ABSTRACT

The goal of the Elementary and Middle School Reading and Communication Skills Component of the Detroit School desegregation plan was to improve students' reading achievement. The major facet of the program was a reading instruction management system called the Detroit Objective-Referenced Tests System (DORT). DORT is a diagnostic-prescriptive approach based on specific skill objectives for each of Grades K through 8. Additionally, the program called for parent involvement in the improvement of middle school students' reading abilities. Results of a product evaluation of the program provided evidence of progress toward the goal of improved reading achievement. Evaluative findings showed that: (1) average levels of reading achievement improved generally in elementary and middle schools; (2) there were continuous gains in attainments of specific reading skills objectives in grades 4 and 7; (3) teachers were adapting reading instruction to individual student needs; and (4) parents were helped in assisting in the improvement of their children's reading abilities. (Author/MK)

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PRODUCT EVALUATION OF THE ELEMENTARY AND MIDDLE SCHOOL READING AND COMMUNICATION SKILLS COMPONENT OF THE DETROIT DESEGREGATION COURT ORDER

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PRODUCT EVALUATION OF THE ELEMENTARY AND MIDDLE SCHOOL READING AND COMMUNICATION SKILLS COMPONENT OF THE DETROIT DESEGREGATION COURT ORDER

Abstract

The Elementary and Middle School Reading and Communication Skills Component of the 1975 court order for desegregation of Detroit schools has as its primary goal the improvement of pupils' reading achievements. The main facet of the component program is a reading instruction management system called the Detroit Objective-Referenced Tests system, commonly known as DORT, which is implemented in all elementary and middle school reading classes. Essentially, DORT is a diagnostic-prescriptive approach to reading instruction based on specific reading skill objectives for each of Grades K through 8.

A subsidiary facet of the component program is the Home Curriculum Parenting Program which provides for parent involvement in the improvement of middle school students' reading abilities.

Results of an ongoing product (outcome) evaluation of the component provide evidence of substantial progress toward the goal of improved pupil achievements in reading. The findings can be summarized as follows:

1. Annual city-wide reading achievement test results show that average levels of reading achievement have improved generally in elementary and middle schools.

2. Results of the annual Michigan Educational Assessment Program reading tests show continuous gains in attainments of specific reading skill objectives by Detroit pupils in Grades 4 and 7.

3. Teacher survey results attest to improving ability of teachers to adapt reading instruction to individual pupil needs.

4. Results of a survey of participants in the Home Curriculum Parenting Program indicate that the program has effectively helped parents assist in the improvement of their children's reading abilities.

Research and Evaluation Department
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March 1981

PRODUCT EVALUATION OF THE ELEMENTARY AND MIDDLE SCHOOL
READING AND COMMUNICATION SKILLS COMPONENT OF THE
DETROIT DESEGREGATION COURT ORDER

Introduction

The Reading and Communication Skills Component of the 1975 court order for desegregation of the Detroit Public Schools is one of several supplemental educational programs ordered by the court to remedy the effects of past segregation in Detroit schools. The ultimate goal of this component is to develop those reading and communication skills required for success in school and in everyday life.

At the elementary and middle school levels the component program is essentially a reading instruction management system known as the Detroit Objective-Referenced Tests system, commonly referred to as DORT. The major features of the DORT system are as follows:

1. The system is basically a diagnostic/prescriptive approach to reading instruction, involving diagnosis to determine individual pupil needs and prescription of learning experiences to meet these needs.

2. The program is based on specific reading skill objectives for each grade (Kindergarten through Grade 8).

3. Tests are used periodically to determine which skills students have mastered and what skills they need to learn.

4. DORT instructional materials are used to focus instruction on specific skill deficiencies.

5. The system provides for integration of DORT skill assessments and learning activities with the use of other commonly used basal reading program materials.

6. Uniform individual student records of objective attainments are maintained. These records are transmitted to the next reading teacher whenever children are transferred to another school and when they are promoted to the next grade.

7. The DORT reading objectives are related to the Grade 4 and Grade 7 reading objectives of the Michigan Educational Assessment Program.

The initial implementation of the DORT program began in the fall of 1976 focusing primarily on teacher inservice education for the purpose of improving student achievements on the Michigan Educational Assessment Program reading tests. In the 1977-78 school year, there was full implementation of DORT in all elementary schools and half of the middle schools. In addition, there was partial implementation of DORT in the remaining middle schools. Full implementation of DORT was accomplished in all middle schools in the 1978-1979 school year.

The key to the success of the DORT reading system is its systematic and correct implementation by every elementary and middle school classroom teacher who is assigned the responsibility of teaching reading and communication skills to Detroit students. Successful program implementation has been aided by the services of approximately 60 reading specialist teachers. These reading specialists give preservice and inservice training through workshops and follow-up activities which are necessary for the total implementation of the program. The specialists also assist individual teachers in the administration and analysis of DORT assessments, writing prescriptions, and techniques of classroom management.

The Elementary and Middle School Reading and Communication Skills Component includes a special Home Curriculum Parenting Program which provides for parent involvement in the improvement of middle school children's reading abilities. The program's staff consists of two home curriculum teacher specialists in each of the eight administrative regions of the Detroit school system and, at each Detroit middle school, one parent paraprofessional who is selected by the local school advisory council. At each school the

paraprofessional and one of the region's teacher specialists function as a home curriculum team. Working together with the school administrative staff, the team develops and implements a program for the school's parents.

The Home Curriculum Parenting Program has three major goals: (1) getting better parent participation in their child's learning process, (2) helping parents become more aware of their child's development, and (3) helping parents to develop a home environment that supports learning and academic achievement. Program activities include home visits; workshops conducted in homes, schools, churches, and other community locations; homework assignments to reinforce classroom instruction; classes in reading; and field trips.

The Research and Evaluation Department began evaluating court-ordered desegregation of the Detroit Public Schools in 1977. From 1977 through 1979, the evaluation was primarily a study of the impact of the overall desegregation effort on attitudes of students, staff and parents, and on student achievements. In the fall of 1979, the emphasis shifted to product (outcome) evaluations of the individual court-ordered educational components. This is a first report on the product evaluation of the Elementary and Middle School Reading and Communication Skills Component.

Component Objectives

The following objectives have been established for the product (outcome) evaluation of the Elementary and Middle School Reading and Communication Skills Component:

1. Elementary and middle school pupil's reading achievements, as measured by annual city-wide norm-referenced tests, will show improvements from year to year.

2. Grade 4 and Grade 7 pupils' achievements of Michigan Educational Assessment Program reading objectives will show improvements from year to year.

3. Classroom implementation of the DORT system will improve teachers' adaptation of reading instruction to the needs of individual pupils.

4. Parent participants in the Home Curriculum Parenting Program will learn how they can help improve their children's reading abilities.

Evaluation Findings

Available evidence of progress toward the attainment of the four product evaluation objectives of the Elementary and Middle School Reading and Communication Skills Component is presented below.

Standardized Reading Achievement Test Results

Objective 1.	Elementary and middle school pupils' reading achievements, as measured by annual city-wide norm-referenced tests, will show improvements from year to year.

In Table 1 are presented results of Detroit's annual city-wide tests of reading achievement for all pupils tested in Grades 1 through 7 in the years 1977 through 1980. The results are given in terms of means (averages) of grade equivalent scores. National norms group means (for the month when pupils were tested) are also given.

When considering the test results in Table 1, one should note the changes in tests administered during the period from 1977 through 1980. Pupils in Grades 1 and 2 were tested on the Stanford Achievement Tests (SAT) in 1977 and 1978, and in 1979 and 1980 they were tested on the California Achievement Tests (CAT). Pupils in Grades 3 through 7 were tested on the

Iowa Tests of Basic Skills (ITBS) in 1977 through 1979, and on the California Achievement Tests (CAT) in 1980. Comparisons of the test score means from one year to another, when the tests are different, are not appropriate. However, the available data permit several legitimate comparisons of results for successive years when the same test was administered each year.

The data in Table 1 show that Detroit Grade 1 pupils attained an average SAT reading test score of 1.7 in GE (grade equivalent) units in 1977 and 1978, right at grade level; and that their average GE score on the CAT rose from 1.8 in 1979 to 1.9 in 1980.

TABLE 1

Means of City-Wide Reading Achievement Test Scores of Pupils in Grades 1 - 7, 1977-1980

Grade	National Mean	Means of Reading Test Scores in Grade Equivalent Units			
		1977	1978	1979	1980
		Stanford Ach. Tests		California Ach. Tests	
1	1.7	1.7	1.7	1.8	1.9
2	2.7	2.5	2.5	2.6	2.6
		Iowa Tests of Basic Skills			
3	3.7	3.4	3.3	3.5	3.4
4	4.7	4.1	4.1	4.3	4.6
5	5.7	4.8	4.8	5.0	5.4
6	6.7	5.2	5.2	5.4	6.0
7	7.7	6.1	6.0	6.1	6.6

The data for Grade 2 pupils show an average SAT reading test score of 2.5 for 1977 and 1978, and an average CAT reading score of 2.6 (one month below grade level) in both 1979 and 1980.

For Grades 3 through 7, average ITBS reading test scores show gains of one or two months between 1977 and 1979 for every grade except Grade 7 where there was no change. Although the average 1979 ITBS scores for Grades 3 through 7 range from two months below grade level for Grade 3 to 16 months below for Grade 7, the evidence clearly indicates improved reading achievements for every grade except Grade 7.

The reader will note that mean grade equivalent scores on the 1980 CAT reading test are substantially higher than the means of scores in 1979 for Grades 4 through 7. However, because a different test was used in 1980, it is not possible to say whether or not reading achievements actually improved between 1979 and 1980. The 1980 results will provide benchmarks from which to measure further improvements in reading achievements which occur during the current and future years.

Michigan Educational Assessment Results

Objective 2.	Grade 4 and Grade 7 pupils' achievements of Michigan Educational Assessment Program reading objectives will show improvements from year to year.

The Michigan Educational Assessment Program (MEAP) is a state-wide testing program designed to measure pupil achievements of basic reading and mathematics objectives. The MEAP tests are administered annually in October to all fourth, seventh, and tenth grade pupils in Michigan.

Table 2 presents results of the Grade 4 and Grade 7 MEAP reading tests for 1974 through 1980 for Detroit pupils, as well as for the state as a whole. The table gives the percents of pupils attaining 75 percent or more of the objectives assessed. It will be noted that Detroit results for 1974

through 1976 (before implementation of the reading component) show no increase in the percent of Grade 4 pupils attaining 75 percent of the objectives, and a decrease in the percent of Grade 7 pupils attaining that level of achievement. From 1976 through 1980 (when the component program was in operation), the data show continuous improvements in the performance of Detroit pupils in both Grade 4 and Grade 7. The proportions of pupils attaining at least 75 percent of the objectives almost doubled in the case of Grade 4 (from 25 percent to 46 percent), and actually did double in the case of Grade 7 (from 26 percent to 52 percent). In the same period, state-wide results also improved, but not as much as did those for Detroit. While these gains in Detroit pupils' reading achievements are substantial, comparisons with state-wide results clearly indicate a need for further improvements.

TABLE 2

Percents of Detroit and Michigan Fourth and Seventh Grade Pupils Attaining 75 Percent or More of the MEAP Reading Objectives, 1974 - 1980

Year	Percents of Pupils Attaining 75 Percent or More of the MEAP Reading Objectives			
	Grade 4		Grade 7	
	Detroit	Michigan	Detroit	Michigan
1974	25%	49%	33%	55%
1975	24	51	31	57
1976	25	55	26	56
1977	30	61	35	66
1978	32	62	38	67
1979	39	66	43	69
1980	46	71	52	77

The data in Table 2 clearly attest to considerable gains in the sheer numbers of MEAP reading objectives attained by Detroit fourth and seventh graders. In order to assess achievements of specific reading skills it is necessary to examine measures of attainments of the individual objectives. Tables 3 and 4 present the percents of pupils who attained each of MEAP reading objectives assessed in 1976, 1977, 1979, and 1979. The objectives are grouped by reading skill area. No data are presented for 1980 because many changes were made in the 1980 MEAP reading test and comparisons of results for individual objectives with results for previous years are not appropriate.

The data in Table 3 provide clear evidence of improvements in fourth grade pupils' achievements of every MEAP reading objective. Between 1976 and 1979, increases in percents of pupils attaining the individual objectives range from 10 percent to 20 percent.

Table 4 provides similar evidence of gains in Detroit seventh grade pupil attainments of individual MEAP reading objectives. The figures show that between 1976 and 1979 there were increases in the percents of pupils attaining every objective. The increases for seventh graders ranged from 12 percent to 22 percent.

The specific MEAP reading objectives tested in 1976 through 1979 fall into four major reading skill areas: vocabulary meaning, literal comprehension, inferential comprehension, and study skills. Results of the MEAP tests of 1976 through 1979 by reading skill area are given in Tables 5 and 6 for Grade 4 and Grade 7, respectively. For each skill area are reported the yearly averages of the percents of pupils attaining the objectives encompassed by that skill area.

TABLE 3

Percents of Detroit Grade 4 Pupils Attaining 75 Percent or More of the MEAP Reading Objectives, 1976 - 1979

Skill Areas	Objectives	Percents of Pupils Attaining Objectives			
		1976	1977	1978	1979
Vocabulary Meaning	1. Match words with definitions	44%	50%	53%	60%
	2. Indicate phrases with same meanings	46	52	54	60
	3. Choose word appropriate to blank spaces (Cloze Procedure)	45	47	52	59
Literal Comprehension	6. Indicate factual selections	57	66	70	75
	7. Indicate fictional selections	50	59	62	70
	9. Indicate title most appropriate for selection	38	42	44	51
	10. Indicate pictures best describing main idea in selections	36	38	40	47
	14. Choose phrase best describing work in figurative language	60	67	67	72
	15. Match causes with effects	40	48	49	57
Inferential Comprehension	8. Indicate author's purpose	38	44	47	53
	11. Choose best summary of a selection	23	27	28	33
	12. Match quotation from story with speaker	29	33	36	41
	13. Choose answer best describing how character feels in story	42	49	50	58
	16. Choose most appropriate conclusion for a story	29	34	35	42
	19. Select meanings, generalizations, conclusions not expressed	34	40	42	47
Study Skills	4. Identify method of arranging data	70	77	81	85
	5. Alphabetize words through first three letters	49	53	53	61
	17. Answer locational question about reference sources	47	54	56	64
	18. Answer locational question about newspapers	39	47	51	59

TABLE 4

Percents of Detroit Grade 7 Pupils Attaining 75 Percent or More of the MEAP Reading Objectives, 1976 - 1979

Skill Areas	Objectives	Percents of Pupils Attaining Objectives			
		1976	1977	1978	1979
Vocabulary Meaning	1. Match words with definitions	34%	43%	46%	48%
	2. Indicate phrases with same meanings	53	63	65	69
Literal Comprehension	5. Indicate factual selections	63	75	77	81
	6. Indicate fictional selections	44	57	60	66
	8. Indicate title most appropriate for selection	42	51	55	59
	9. Indicate pictures best describing main idea in selection	52	64	66	70
	13. Answer questions relating to sequence in stories	31	38	40	45
	16. Match causes with effects	36	46	48	53
Inferential Comprehension	7. Indicate author's purpose	40	49	52	56
	10. Choose best summary of a selection	41	53	54	61
	11. Choose selections alike in ideas expressed	34	40	43	46
	12. Match quotation from story with speaker	46	57	59	63
	14. Choose answer best describing how character feels in story	33	41	42	46
	15. Answer questions relating to motivation	39	51	52	56
	17. Select meanings, generalizations, conclusions not expressed	34	45	46	50
	20. Choose most appropriate conclusion for a story	44	53	56	60
Study Skills	3. Identify method of arranging data	43	50	54	58
	4. Alphabetize words through first three letters	66	77	77	80
	18. Answer locational question about reference sources	53	63	66	68
	19. Answer locational question about newspapers	41	46	50	57

TABLE 5

Average Percents of Grade 4 Pupils Attaining MEAP Reading Objectives in Each Skill Area, 1976 - 1979

Skill Area	Average Percent of Pupils Attaining Objectives in Skill Area			
	1976	1977	1978	1979
1. Vocabulary Meaning	45%	50%	53%	60%
2. Literal Comprehension	47	53	55	62
3. Inferential Comprehension	33	38	40	46
4. Study Skills	51	58	60	67

TABLE 6

Average Percents of Grade 7 Pupils Attaining MEAP Reading Objectives in Each Skill Area, 1976 - 1979

Skill Area	Average Percent of Pupils Attaining Objectives in Skill Area			
	1976	1977	1978	1979
1. Vocabulary Meaning	44%	53%	56%	59%
2. Literal Comprehension	45	55	58	62
3. Inferential Comprehension	39	49	51	55
4. Study Skills	51	59	62	66

The data in Tables 5 and 6 clearly show continuous increases in average percents of Grade 4 and Grade 7 pupils attaining the objectives in every skill area. Comparisons among the skill areas reveal that, in every year

reported, pupils in both grades showed higher levels of achievement in the study skills area than in any other skill area, and that their achievements were lowest in the area of inferential comprehension.

Adaptation of Reading Instruction to Individual Pupil Needs

Objective 3.	Classroom implementation of the DORT system will improve teachers' adaptation of reading instruction to the needs of individual pupils.

In the spring of 1979, the director of the Elementary and Middle School Reading and Communication Skills Component administered a questionnaire to all elementary and middle school reading teachers. The major purpose of this questionnaire study was to identify strengths and weaknesses in the classroom implementation of the DORT system. A total of 1900 teachers returned completed questionnaires. Responses to two questions provided evidence relevant to Objective 3.

Each question asked teachers whether they agreed or disagreed with a statement concerning their use of the DORT system. The statements, percentage distributions of responses, and comments on findings follow.

1. The DORT tests were helpful in assessing the individual needs of my students.

Strongly Agree	Agree	Disagree	Strongly Disagree
16%	63%	16%	5%

2. The DORT instructional materials were helpful in teaching to the individual needs of my students.

Strongly Agree	Agree	Disagree	Strongly Disagree
14%	58%	18%	10%

These questionnaire results show that about 80 percent of Detroit's elementary and middle school reading teachers felt that the DORT tests helped them identify individual pupil needs, and that about 70 percent believed that the DORT instructional materials helped them teach to the needs of individual pupils.

Home Curriculum Parenting Program Benefits

Objective 4.	Parent participants in the Home Curriculum Parenting Program will learn how they can help improve their children's reading abilities.

The Home Curriculum Parenting Program (which operates at the middle school level only) is described in the Introduction of this report. In an effort to determine the extent to which this program's goal has been attained, a survey of parent participants was conducted. In May 1980, questionnaires were mailed to 300 parents who had attended at least one workshop, and/or had received some other kind of service from a home curriculum staff member. Forty-two parents returned completed questionnaires. Although this relatively small sample may not be representative of all participants, the survey findings do provide some evidence of program effectiveness based on judgements of parents who personally received program services.

One of the survey questions asked parents if, as a result of their participation in the program, they had learned reading skills and techniques that they were using to help their child's reading development. Of 39 respondents, 79 percent answered "Yes."

Several questions asked parents to what extent other benefits had resulted from their participation in the Home Curriculum Parenting Program.

Some of the specific benefits inquired about and the distributions of parent responses were as follows:

Benefit	Percents of Parent Ratings Of the Extent to Which The Benefit was Obtained		
	Little or Not at All	Somewhat	Greatly
You are able to communicate with your child better.	6%	36%	59%
You have helped your child become a better reader.	6	43	51
Your home environment supports learning better.	12	26	62
You understand your child's needs in reading better.	3	20	77
Your relationship with the school has improved.	12	26	62

These questionnaire findings show that nearly all of the parent respondents felt that the Home Curriculum Parenting Program had helped them attain each of the following benefits: better communication with their child, an improved home environment for learning, a better understanding of their child's reading needs, a better relationship with their child's school, and improved ability to help their child become a better reader. Moreover, most of these parents felt that their participation had contributed "greatly" to the realization of each benefit. All of these kinds of benefits from parent education efforts are commonly regarded by reading authorities as conducive to more effective parent assistance in the improvement of children's reading abilities.

Summary of Evaluation Findings

The findings of this evaluation of the Elementary and Middle School Reading and Communication Skills Component provide evidence of substantial progress toward the goal of improved pupil achievements in reading.

Annual city-wide norm-referenced test results for 1977 through 1980 show that average levels of pupils' reading achievements have improved generally. Test results for Grades 1 through 7 provide evidence of gains in average reading achievement levels for all grades except Grades 2 and 7.

Results of the annual Michigan Educational Assessment Program (MEAP) reading tests show continuous gains in the proportions of Detroit's Grade 4 and Grade 7 pupils attaining 75 percent or more of the objectives assessed. Moreover, the MEAP reading test results attest to gains in percents of pupils achieving every individual objective, both in Grade 4 and in Grade 7.

Although average reading achievements of Detroit elementary and middle school pupils are still well below national and state averages, these results clearly show substantial improvements since the implementation of the reading component program.

Results of a survey of 1900 elementary and middle school reading teachers reveal that about 75 percent of these teachers believed that their use of the DORT (Detroit Objective-Referenced Tests) system had improved their ability to adapt reading instruction to the needs of individual pupils.

Findings of a survey of participants in the Home Curriculum Parenting Program provide evidence that the program has effectively helped parents understand their children's reading needs, help their children learn reading skills, and provide an improved home environment for learning.